

# COST *and* MANAGEMENT

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# • EDITORIAL •

## Commodity Price Inflation

In the United States and Canada, for the last one hundred years, there has been a trend established that follows generally the principles of FREE ECONOMY such as is desired in democratic countries, and especially in this North America. In examining these statistics, it is evident that there have been in the past, periods of commodity price inflation. The outstanding occasions of peak inflation occurred during the three years' war, 1814 to 1815. There was another period during the American Civil war in the years 1864 to 1865. The most recent inflation happened during the first world war in the years 1919 and 1920. Due to the normalizing effect of the CONTROLS recently relinquished, the immediate session of inflation may not be as severe nor as long as the previous depressions or rather inflations. THAT IS, PROVIDED WE CONTROL OURSELVES. The economic laws would indicate that just as in the other occasions, the periods of levelling followed inflationary trends, in the years after 1816, 1866, and 1921, so it is reasonable to assume that there will be a levelling period to come. As in the CONTROL effect in minimizing inflation, that same effect will doubtless be experienced during the levelling period preceding what might be termed NORMAL TIMES. It must of course be remembered that this economic trend is subject to the effect of the HUMAN FACTOR and also the condition of the speed of modern communications and radio. The peak to peak time of the first two periods were about fifty years, the next period was about thirty years. In proportion to the present speed of commerce and trade, the next period could be much shorter.

## A Message to Our Young Members and Students

At this time of the year, when colleges are again opening, and courses are being commenced or continued, it would seem appropriate that we, and especially we who are students, examine our intellectual inventory and determine whether we are taking full advantage of the opportunities to which we, as cost accountants, are destined. One might say to one's self, "AM I DRIFTING OR AM I ROWING?"

We are currently passing through a phase of "Historical Costing" to one involving "Budgets, Present and Future Costs." The larger the business the more the interest in future costs. In the smaller business one can see at the foot of the financial statement, some such certification as, "Subject to the foregoing, I hereby certify that, in my opinion, the accompanying balance sheet is properly drawn up so as to show a true and correct view of the state of the company's affairs, as at the date thereof, as shown by the

## EDITORIAL

books and according to the information given to me." This is an example of historical accounting.

It should be pointed out that this certification was given at from three to six months after the end of the financial year end. Older accountants can well recall that a similar certification was given, and nothing more, as long as twenty-five years ago. In these fast-moving times this information is too late to be of real value for operating purposes. For operating efficiency, it is belatedly inadequate in the highly competitive business field of to-day.

Our Chapters and members should, in such instances, advise that we are giving courses to our students, which qualify them to provide cost information that is of essential value in policy planning of executives. We endeavour to train our students to do constructive thinking for themselves so that they are capable of giving COST ACCOUNTING SERVICE in the present as well as in the future, in business operations. We are a professional body who help chart the course of operations during next week, month or year. Our efforts help business arrive at the reasonable answer for this financial year.

To our students we ask, "Have you seen Auguste Rodin's statue, 'The Thinker'?" On viewing the masterpiece, Dr. Joseph Fort Newton has said, "Real, unbiased, problem-solving thinking is one of the rarest things on earth. Indeed, we are afraid of it. It makes our fixed ideas rattle like an earthquake and, that frightens us."

In this relentless fight for a living, few of us get many opportunities to really think in this way. Our lives are filled with so many routine customs, requirements, habits and environments, that most of us would be temporarily lost if divorced from them.

To-day, as never before, the world needs thinkers. Most of our old ideas are just so much junk and ought to be scrapped. They are worn out and will not work. They do not fit into the plain facts of life. STUDY makes us THINK. Thoughtful questioning and applied effort at answering, produces analyses and from such analyses come intelligent SOLUTIONS.

Students with unfinished courses are left undeveloped in their ability to PROFIT FROM THE MANY PRESENT DAY OPPORTUNITIES.

We recognize and reward our worthy and successful students with the R.I.A. designation, in many provinces. This designation is identified as "Registered Industrial and Cost Accountant."

STUDENTS! You may profit by working and trying. Perhaps you had better try. It has been written:

Better to strive and climb  
And never reach the goal,  
Than to drift along with the time  
An aimless and worthless soul.  
Aye, better climb and fall,  
And sow though the yield be small,  
Than to throw away day after day  
And never strive at all.

The students will generally find that there is some senior member in the

## COST AND MANAGEMENT

educational committee of the chapter to give counsel and assist when the course seems hard.

### THE DOLLAR VALUE IN PRESENT DAY BALANCE SHEETS

What conclusion can the stockholder, the public, or the accountant come to in examining the present day balance sheet of a business that shows inventories and sales, the revenue factors at present day inflated values and at the same time carries the Assets and long term Liabilities, at the original values of say ten or fifteen years ago? Higher prices do not affect, nor are they reflected in Assets in existence at basic period values. One cannot deny that the revenue producing ability at inflated prices is out of proportion, but this fact is seldom covered in the published financial statement. However, at the same time some labor organizers claim, for this reason and from this form of information, that profits are high. This information is used in the claim that profit should be shared with the workmen.

One of our leading economists has suggested that high prices are not in themselves a menace to business stability. Prices which accurately reflect current supply and demand can scarcely be dangerous in themselves, however burdensome to those who have saved, or to those whose incomes have not risen. Current prices in Canada have not reflected a disposition on the part of the sellers to hold goods for prices which buyers refuse to offer and moreover, up to date, there is a readiness of business to make markdowns, where goods would not otherwise be sold.

Stabilization may not yet be in sight because price increases are a dangerous influence which tend to upset the economy and bear very harshly and inequitably on certain groups, but price increases to meet cost increases are far less dangerous than attempts to keep prices down by law.

THE DESIRE TO WORK WILLINGLY is the key factor in our economic improvement.

## Labour Management Relations

In our July issue we had the pleasure of publishing a paper prepared by Mr. T. P. Dalton, Personnel Manager, Shawinigan Water & Power Co., on the subject of Labour Management Relations.

Attention is drawn to the fact that the last paragraph of this article as published on Page 258, commencing with the sentence, "The closed shop, under proper conditions of performance and production and apprenticeship, has merit" . . . was not a part of Mr. Dalton's paper and was printed as such in error. We wish to emphasize that it does not represent the author's views and our sincere apologies are extended to Mr. Dalton.

## COST AND MANAGEMENT

### New Members

#### **St. Maurice Valley Chapter**

Howard William Hamilton, Brown Corporation, La Tuque, P.Q.

#### **Fort William-Port Arthur Chapter**

Robert Stanley Wilson, Marathon Paper Mills of Canada Ltd., Marathon, Ontario.

Vernon D. Kyle, Northland Machinery, Fort William, Ontario.

Colin Murdo Nicolson, Thunder Bay Paper Co. Ltd., Port Arthur, Ontario.

#### **Hamilton Chapter**

John H. Young, Kraft Containers Ltd., Hamilton, Ont.

Paul E. Walker, Canadian Cottons Ltd., James St. N., Hamilton, Ont.

Reginald U. Bradley, Fuller Brush Co., Hamilton, Ont.

Kenneth Putman, T. H. & B. Railway Co., Hamilton, Ont.

R. Langdale, William Tool Corporation, Brantford, Ont.

James Crossan, C.A., Peat, Marwick, Mitchell & Co., C.A., Hamilton, Ont.

Eric M. B. Wood, Massey-Harris, Brantford, Ont.

James Harvey Laing, Williams Tool Corp. of Canada Ltd., Brantford, Ont.

Roy Stewart, Canadian Westinghouse Co., Hamilton, Ont.

Hugh Guild, Community Motors Ltd., Hamilton, Ont.

Thomas Charles Park, American Can Co. Ltd., Hamilton, Ont.

Harry Thomas Rouse, American Can Co., Hamilton, Ont.

Douglas Haig Eckold, Building Products Ltd., Hamilton, Ont.

H. Victor Marshall, International Harvester Co., Hamilton, Ont.

Wm. Cameron Grant, Building Products, Ltd., Hamilton, Ont.

Harold Duncan Olmsted, Building Products Ltd., Hamilton, Ont.

Gordon Donaldson, Meakins & Sons, Hamilton, Ont.

Murray Adelman, International Harvester Co., Hamilton, Ont.

Harold Q. Lyon, Canada Coach Lines, Hamilton, Ont.

Charles Macdonald, Steel Co. of Canada Ltd., Hamilton, Ont.

Harry Plumb, Steel Co. of Canada Ltd., Hamilton, Ont.

#### **Kingston Chapter**

Frederick J. Greer, Canadian Industries Ltd., Kingston, Ont.

William H. O'Donnell, Canadian Industries Ltd., Nylon Division, Kingston, Ont.

#### **Kitchener Chapter**

Douglas William Hancock, Galt Metal Industries Ltd., Galt, Ont.

Eric K. Wilson, Fleury-Bissell Ltd., Elora, Ont.

Reginald E. Chadder, Fleury-Bissell Ltd., Elora, Ont.

John Robert King, Butler Stampings & Machine Screws, Preston, Ont.

Arthur Reginald Barber, Galt Metal Industries Ltd., Galt, Ont.

#### **Ottawa Chapter**

J. A. L. Lalonde, The Ottawa Journal, Ottawa, Ont.

J. M. Laroche, A.P.A., Public Accountant, Ottawa, Ont.

C. P. Tremblay, Eldorado Mining & Refining (1944) Ltd., Ottawa, Ont.

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### Toronto Chapter

H. W. Edwards, Business Systems Ltd., Toronto, Ont.  
Russell Herbert Harrison, Metals and Alloys Ltd., Leaside, Ont.  
Kenneth W. Flanagan, Wm. E. Dixon Mfg. Co., Toronto, Ont.  
Wm. Wright, Browns' Bread Ltd., Toronto, Ont.  
Duncan Ian MacLean, Ogilvie Flour Mills Co. Ltd., Toronto, Ont.  
John L. MacAlpine, Trane Co. of Canada Ltd., Toronto, Ont.  
Leonard George Dawson, Frigidaire Products of Canada Ltd., Leaside, Ont.  
Kenneth Donald Eason, Standard Paving & Materials Ltd., Toronto, Ont.  
William Woods, 8 Berkeley St., Toronto, Ont.  
Thomas V. Harris, Canada Packers, Toronto, Ont.

### Windsor Chapter

Robert John Wilson, Ford Motor Co., Windsor, Ont.  
Wilson James Bowey, Canadian Motor Lamp Co. Ltd., Walkerville, Ont.

### Winnipeg Chapter

Harold E. Howland, Stonewalle, Man.

### Calgary Chapter

Terence Gerald Bullough, District Treasury Office, Dept. of Finance, Calgary, Alta.  
Albert Thomas KilarSKI, Independent Grain Co. Ltd., Calgary, Alta.

### Edmonton Chapter

Clarence Frederick Lang, Horse Co-operative Marketing Ass'n. Ltd., Edmonton, Alta.  
Harold Houghton Gregson, 406 Post Office Bldg., Edmonton, Alta.

### Vancouver Chapter

George Henry Colson, Cost Inspection and Audit Division, Vancouver, B.C.  
John Purse, Consulting Accountant and Business Management, Vancouver, B.C.  
Edward John David Rutherford, Terminal City Iron Works Ltd., Vancouver, B.C.

### Non-Resident B.C. Society

Paul Anthony Pellicano, Canadian Canners Ltd., Penticton, B.C.

## COST AND MANAGEMENT

### Chapter Notes

#### CALGARY CHAPTER

The season's activities opened with the regular supper meeting on September 10th with a fairly good attendance. Discussion was initiated by the Chairman, Mr. H. G. Saxton, outlining plans for the season, which eventually centred on methods for assisting students. Mr. Pat Bowsher gave a stimulating talk on this subject and a definite programme of student meetings is being arranged under the chairmanship of Mr. W. J. Mack. The Dominion President was present but had to leave in a hurry to catch a plane for the West Coast, reserving his message for the official visit with our Secretary-Manager after their B.C. tour.

This visit was arranged for September 19th, when about forty members were present to greet them at the Renfrew Club. An informal get-together preceded dinner, after which we heard two outstanding addresses. Mr. Alvin Tupper, Dominion President, gave an interesting report on development of the Society throughout the Dominion and then addressed the members on "Problems in the Development of a New Business." Mr. J. N. Allan followed with some very interesting details on the Society's activities. His subject, "Our Responsibility—Where Does it End?" gave the members new ideas, was packed full of inspiring thoughts and convinced those present that each had a real contribution to make for the welfare of our Society, and through it to Canadian business and community life.

Our Chairman, Mr. Saxton, presided and the Provincial President, Mr. T. R. Humphries, spoke on behalf of the Provincial Society. Votes of thanks to the speakers were proposed by Mr. L. W. Bessell and Mr. R. Berrington.

#### HAMILTON CHAPTER

An excellent attendance marked the opening fall meeting of the Hamilton Chapter at Robert's Restaurant, Thursday evening, September 18th. The newly elected chairman, Harold Bricker, C.G.A., R.I.A., presided.

The speaker of the evening was Arthur H. Frampton, B.A.Sc., Director of Engineering for the Hydro-Electric Power Commission of Ontario. His address on the new power projects of the Commission, illustrated with moving pictures in technicolour, was received with rapt attention by his audience. Mr. Frampton first traced briefly the history of the Commission from 1906, when it was first conceived by a group of thirteen municipalities who sought to buy power co-operatively. Power was first delivered in 1910, and to-day, 304 municipalities are dealing with the Commission.

The speaker stated that its peak load in 1946, of 2,658,000 H.P. and over 911,000 consumers, has placed it in the position of fifth largest public utility on this continent.

Mr. Frampton pointed out that, although all public utilities were prepared for a post-war recession, nevertheless, the opposite condition has prevailed. To-day the peak load is higher than during the war years, and is

## COST AND MANAGEMENT

increasing. The Hydro-Electric Power Commission of Ontario, despite the shortage of materials, is forging ahead to meet the demands of industry. The Commission has a five-year expansion programme under way that will entail an expenditure of over \$275,000,000, and will add in excess of 1,000,000 H.P. to its present capacity. The greater part of this development is in Northern Ontario. The speaker, in an interesting and non-technical manner, described the engineering problems encountered, and the distinctive peculiarities of each river used for power purposes. Included in this programme is the neighbouring DeCew Station near St. Catharines.

James Hammond, chief accountant of the Hamilton Hydro-Electric System, moved a vote of thanks to the speaker.

## OTTAWA CHAPTER

The first meeting of the 1947-48 season of the Society of Industrial and Cost Accountants of Ontario, Ottawa Chapter, was held at the E. B. Eddy Company staff cafeteria on Thursday evening, September 25th.

After dinner, Mr. Dave Hutton, President of the Chapter, introduced the speaker of the evening, Mr. Georges Kieffer, the regional coverage officer of the Unemployment Insurance Commission, from Montreal, who spoke on the history of unemployment insurance. Mr. Kieffer, in tracing the growth of unemployment insurance from the beginning of the nineteenth Century through to its present administration, covered such points as its social aspect, security appeal and administration of the Act. He also explained how the Act had now been enlarged to cover some of the seasonal workers such as loggers and longshoremen. Following the talk, an open discussion period was held and many points of interest to the individual members were discussed.

At the conclusion of the meeting, Mr. George Malloch thanked the speaker for the interesting talk and expressed the appreciation of the members of the Chapter.

## ST. MAURICE VALLEY CHAPTER

On Saturday, September 27, 1947, the St. Maurice Valley Chapter opened its second season with a visit to a Logging Camp of the Consolidated Paper Corporation. Twenty-one members of the Chapter left Grand'mere at 8.30 in the morning and motored to the forestry depot at Lac Brown. At noon, lunch was served—a lumberman's lunch—which was enjoyed by everyone although the quantity was a little too great for white collar workers.

After lunch, the members visited around the depot and then motored 17 miles further into the bush to where jobbers were erecting a camp. Then they tramped through the bush for half an hour and finally arrived at the scene of cutting operations. For supper, they drove 5 miles further to Lake Chien. Later, they left for home after a very enjoyable day in the bush.

The thanks of the party are due to Mr. A. F. Gurr, the President of the St. Maurice Valley Chapter and to the Consolidated Paper Corporation for their arrangement of a successful afternoon. One should also remember the arrangements made by Mr. J. U. Courteau, Secretary, for transportation.

## CURRENT LITERATURE DIGEST

### WINDSOR CHAPTER

On September 25, 1947 a general meeting was held at which Mr. Gordon R. James presided as Chairman. Following the dinner two new student members, Mr. Wilson J. Bowey and Mr. Wilson Abraham were introduced to the meeting. The directorate for the current season were then presented, followed by the committee chairmen who gave a brief resume of their proposed activities for the coming year.

Mr. F. Bear gave a detailed description of the 1947-48 programme and then introduced the guest speaker of the evening, Mr. Paul R. Pratt, Ontario Sales Manager, Remington Rand Ltd., Toronto, Tabulating Machines Division. Mr. Pratt's topic was "The Use and Application of Tabulating Equipment." He demonstrated to his audience very capably the various types of accounting machines, their functions, and how they are successfully operated in many phases of modern accounting.

A most interesting discussion period followed the speakers address following which Mr. Pratt was extended a vote of thanks on behalf of the chapter by Mr. J. Tennant.

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# Current Literature Digest

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By HAROLD BRICKER, C.G.A., R.I.A.

The world is getting smaller economically. There is no better evidence of this than in the April 1947 Cost Bulletin of The Australasian Institute of Cost Accountants on "Efficient Productivity of Labour." Substantial progress is being made in the speeding up of production. They have also learned from the war experience that there is merit in getting the right man for the kind of work to be done. There is a point in man or woman appraisal and classification which has come to the fore and is one that is evident in all countries. It is, after the person's ability and compatibility have been determined, "Is the employee WILLING TO WORK?"

With all our apprenticeship privileges and preliminary training for the job or responsibility, the personnel executive may determine that the person is fit for the work, but, there is still the question of whether he is willing to work. Honesty and integrity may be estimated from past records and where this information is not available, those facts cannot be known. ONLY THE PERSON HIMSELF OR HERSELF CAN DEMONSTRATE "A WILLINGNESS TO WORK."

#### CAN THE COST OF LIVING INDEX COME DOWN? WILL IT?

As the cost of living is rising, we wonder whether it will ever again recede. How many of us are really interested in whether it will or not? On examining Canadian government statistical records, it is interesting to know that the low index of 1913 of 76.6, rose in 1928 to 128.3. This was the peak for that decade, but it receded to a low of 87.6 in 1932.

After every period of inflation in the last one hundred and fifty years,

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the cost of living normalized in the course of time. According to the laws of economic trend, THE COST OF LIVING WILL AGAIN COME DOWN.

Cost accountants can advise executives in BUSINESS VOLUME TRENDS if they will study historical records reflected in statistics, with an economy sense.

## THE PROFIT-VOLUME RELATIONSHIP

Charles H. Gleason has written an article under this heading in a recent N.A.C.A. Bulletin. Profit-volume relationship is the effect that changing volume, cost, price, and mix of products have on profits.

For an easier interpretation of this condition the GRAPHIC CHART has been suggested. The logical way to determine whether an account is variable or fixed is through the analysis of past operating costs. The simplest and perhaps the best way to make this analysis is by building a scatter chart on graph paper. In order to build a scatter chart, we must first decide on the barometer which will serve best as the base of the graph or measure of production activity.

Many types of information can be set down in graph form. One group of barometers which meet desired requirements of simple and ready availability could be:

1. Units of production of each product.
2. Direct labour hours or dollars.
3. Machine hours.
4. Sales value of production.

Units of production, direct labour dollars, and labour or machine hours are generally preferred as barometers when analyzing factory or manufacturing burden or overhead conversion costs; whereas the sales value of production is the preferred base when analyzing administrative and selling expenses. The visual location of the medial line, or use of the rule of "least squares" is satisfactory for all practical purposes of analysis. When the various conclusions determined from the information taken from the operating statement figures is combined, the result should provide a graph in which the "break even" position of the operating period is apparent.

From the various graphs, the visual consideration of the laws of COSTS AND PROFITS can be more clearly understood by management, controller, and the cost accountant, in relation to their business. These laws are:

1. A change in the amount of fixed cost changes the break-even point of operations, but not the marginal income ratio or the progressive rate of net profit.
2. A change in the variable cost changes the break-even point, the marginal income ratio, and the progressive rate of net profit.
3. A change in the selling price has the same effect as a change in the variable cost.
4. The marginal income ratio is affected only by changes in selling price or variable cost.
5. A change in both fixed and variable costs changes to a still greater degree of the break-even point, the marginal income ratio, and the progressive rate of net profit.
6. When the marginal income ratio is low—below 15 per cent—large

## CURRENT LITERATURE DIGEST

changes in volume are required to produce any considerable change in profits. Conversely, as the volume falls below the break-even point, the accumulated losses will be at a relatively slow rate.

7. If large increases in volume are attained at a low marginal income ratio, additional working capital may be required faster than it is made available by the marginal income. In such case, a business with inadequate working capital is likely to encounter financial difficulties.

8. When the marginal income ratio is high—above 40 per cent—large profits and an easy cash position result from comparatively small increases in volume above the break-even point. Conversely, heavy losses will result from relatively small decreases in volume below the break-even point.

9. The size of the safety margin determines to a considerable extent the soundness of the business. A high safety margin means that the business can absorb a considerable drop in sales volume before showing a loss.

There are many ways in which this technique of profit analysis may be used. The progressive steps could result in the culmination or apex of the steps taken, which might include:

1. Analysis of the fixed and variable elements of costs.
2. Determination of the break-even point of operations.
3. The effect on profits of changes in variable or fixed costs.

The profit-volume analysis and profit projection to administrative sales, or production management may be in statement form or it may be made in a combination form of statement set up visually in graph form. Some people who cannot interpret and retain facts when presented in statement form only, can quickly grasp facts pictured in graph form.

Prestige is gained by the cost accountant who appreciates the psychology of selecting a suitable or right medium for conveying an important message such as that in the field of Assets, Operations and Profit analysis.

For those who feel that they are not able to carry through the suggested information noted above to graph form, this article with illustrated graphs appears in the N.A.C.A. Bulletin of July 1st, 1947, Section One, Vol. XXVIII, No. 21.

## ARE WORLD ACCOUNTING STANDARDS EVEN NOW ON THE HORIZON?

In the International Bank, and in the operations of the International Fund, there is expected to develop one substantial result having no connection with the main business of the fund, but of inestimable value to the development of international understanding. As the fund's operations continue, the normal result expected by economists is that many countries, and particularly the smaller ones, which heretofore have had no very accurate systems of accounting for their economic affairs, will develop methods akin to those used by the larger ones. The optimum expected for the long future is a situation under which fiscal officers of all countries can exchange information on the basis of mutually understood balance sheets.

There is already evidence that British countries, as well as other foreign countries, are measuring ACCOUNTING IN ALL ITS FIELDS in Canada

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and in the United States. Our accounting publications are being closely followed so as to take advantage of the newest principles that our research may develop.

### COSTS FOR PLANNING PURPOSES

In the N.A.C.A. Bulletin recently issued we find an article under the above subject by Walter A. Holt. The contribution of the cost accountant is worthy of being brought to the attention of our members.

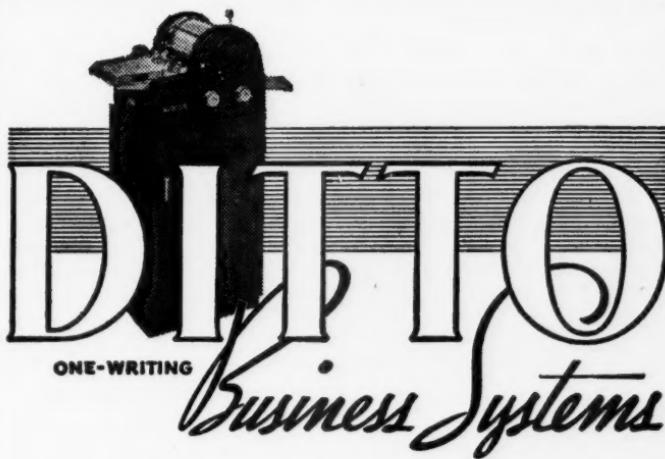
There was a time when the cost accountant was looked upon, in industry, primarily, as a recorder of actual costs or a financial historian. More recently, the cost accountant's technique has been applied to the constructive day-to-day operation of the business. Through the development of budgetary and standard cost procedures, cost accounting has assumed an essential role in the actual reduction and control of operating expenses. The cost accountant, therefore, has attained a very close relationship to the operating or production phase of the business as well as to its management.

The cost accountant also offers assistance in the forward planning of the company's activities. This involves the application of cost analysis to a set of assumed conditions rather than actual facts in a field which may include but need not be limited to the following:

1. Production determination and design.
2. Equipment selection.
3. The determination of the desirability of manufacturing or purchasing component parts and assemblies.
4. The economic advisability of further plant expansion.

Full time cost accounting personnel work very closely with the engineering department, laboratory, production planning and purchasing sections by making cost analyses at every change of design and the determination of facilities available, special tool costs, operation routings, time elements, and job evaluation so that they may co-ordinate the data of these departments and present an assumed cost of the new product. The cost representative also sits in all regular meetings of the sales, production, and engineering departments when changes in design are considered and is responsible for the evaluation of the relative cost of the proposed changes, taking into consideration obsoleted materials as well as direct manufacturing cost. If an idea is proven uneconomical at an early stage, it can be dropped before it has gone beyond the rough planning period. The early detection and rejection saves the time and effort which if allowed to accumulate in the succeeding departments would be a considerable loss. The engineering and production planning organizations are the nerve centres in any manufacturing concern and if the cost accountant can assist them in the effective application of their time and efforts, he has established his services as a sound investment.

Cost accountants have been bemoaning the fact that management does not recognize their service for its true value. There are many opportunities for cost accountants to take the initiative where they will receive commendation for their efforts. The burden is upon the cost accountant to show his worth. Assisting in the long run planning phases of the business is another means by which the cost accountant can demonstrate the value of his services.



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## Costs—What They Can Do For Us

(By A. V. MADGE, L.C.M.I.)

Secretary-Treasurer, Crawley & McCracken Co. Ltd.

The subject selected for our discussion this evening is "Costs — What They Can Do For Us." This topic could lead us into a detailed study of the many phases of cost accountancy. This, however, is not a gathering of juniors in the accounting field. The meeting was planned by and for a group of cost accountants and business executives who have already found success in their chosen fields and, thus, cannot be as interested in the "how" of cost accounting as in the benefits that cost accounting may bring. After all, you might have the best cost accounting system for your business that can be devised, but if you fail to use the information it gives, the system itself is just an added burden. Knowing how to find costs and knowing how to use cost information are all too frequently considered as being far apart as the poles; when, in reality, they are not two entirely different subjects but, rather, two different phases of the same subject. Happy indeed is the man who finds employment with an organization wherein he is able not only to supervise the cost finding procedure but also to analyze that which his records reveal and to take an active part in any corrective measures in the manufacturing processes or business policies that might be considered necessary. Happy the man — but fortunate the organization.

### COSTING NOT ALWAYS A NECESSARY FUNCTION

Cost accounting is comparatively a recent business function. There was a time when it would have been of little value and, even to-day, in certain shops cost finding in its accepted sense is still not required. For example, let us visit the workshop of a certain violin maker in Italy. There is the rude substantial bench, the simple tools, the working forms and patterns, the double glue pot, spruce and maple in planks and blocks, bits of fiddles and partly finished scrolls hung up on the walls; the aproned artificer is carefully working as he sits on his three-legged stool. What simplicities! In such a shop Stradivari mused and carved for the better part of a century, which time he produced those Cremona chefs-d'œuvre, the admiration of all violin virtuosi, which modern makers have never been able to excel or, in the opinion of many experts, to equal.

Those concert violins, the value of which any of us would be glad to receive as a yearly salary, required no cost accounting procedure. And, where the same conditions still apply, cost accounting is unnecessary. Could you imagine a cost finding method in the establishment of the corner shoe repairer?

### COSTS CANNOT MEASURE ALL FUNCTIONS

It is hardly necessary to paint a comparative word picture of industry as we know it to make us understand why cost accounting is a necessary function in the modern industrial organization with all its specialized, interlocking processes, requiring the efforts of many workers. We know that a

## COSTS—WHAT THEY CAN DO TO US

proper knowledge of costs is a "must" in the highly competitive industrial world of to-day. Always remember, however, that like the Strad violins, some things cannot be measured in terms of cost of production. A man's ability is not always reflected in the salary he receives. Advertising costs are generally difficult to pro-rate against a number of different products. The allocation of overhead costs can result in a call for headache powders. The cost of experimental work and of industrial research often bears no relationship to the results obtained, for such work might result in the discovery of processes of great value at little cost, or the result might be summed up in the expression "experiment a failure" after the expenditure of much time and money. Costs of this nature are, in reality, capital expenditures to be gathered into a special account for subsequent transfer to an asset account reflecting the value of an acquired process or invention — or, if need be, to a special expense account. Each such cost must be judged solely upon its own merits as, often, it is not possible to determine whether the expenditure is of a capital nature or not. It is bad cost accounting and an entirely incorrect picture is given when successful inventions are charged with the cost of experiments that have proven unsuccessful.

The function of accounting is to produce complete, accurate, and prompt information about business transactions and results. One of the ends also to be reached is to locate responsibility for waste, inefficiency, and infidelity.

## COST RECORDS PROVIDE A TOOL FOR MANAGEMENT

The accounting records and statistical data should be used not only for the purpose of ascertaining what has happened, but also for future guidance, or for the development of plans for the future and the determination of policies. Accounting, if it is to be worth anything at all, should serve both these ends. Always remember, however, that the system employed is merely a tool for the use of management and should not and cannot take the place of executive intelligence. An accounting system can never be anything else but an accounting system; and unless the statistics and trends which are revealed by the accounting system are given proper analysis and the analysis then used for the future guidance of the business, the method might just as well be abandoned because, in such case, it is not the tool that is wrong (though it might need sharpening and lubricating), the fault lies entirely with those human beings who are occupying positions in top management. Regardless of how efficient the costing system, executives, by their interest or lack of interest, can make or break it.

A good accounting system is designed primarily for the gathering of information to be used by executives. A point that should receive consideration is that executives rarely have time for anything but essential data; the reports submitted to them, therefore, should contain only essential facts. A good tenet to follow is to give executives sufficient information so that they may avoid "half-baked" decisions based on guesswork, snap judgment, or the blind following of precedent. Then, if more detailed information is required, be in a position to supply it. Now is a good time to remark that the preparation and analysis, particularly the analysis, of reports for executive use is one of the finest ways to train for a future executive position. Plan just how you would act upon the information given

## COST AND MANAGEMENT

in your reports; then compare your plan with the action actually taken by the responsible executive in your organization. If he should fail to take any action, build yourself by suggesting what steps might be taken. Do not fail to give your immediate superior any well thought out ideas you may have. Sooner or later you will receive credit for what you are doing and recognition for your suggestions. Never discount the importance of your job and never minimize the part that you play in the affairs of your company. What you constructively do and what you constructively think can be of influence in your organization and of ultimate profit to you. Many accountants have risen to positions in top management through becoming the right hand man to a key executive. Your training and practical experience as a fact-finding cost accountant will be found to be valuable assets when your executives have a job that is looking for the right man. If you are prepared for the future you need not fear it. Prepare for promotion to-day so that you can welcome it to-morrow.

## LOOKING BEYOND THE FIGURES

It has already been suggested that cost records are of little value unless the figures given therein lead to definite action. Costs should teach us to look beyond our figures. The interpretation of costs and the determination of the cause of all variances are an important phase of costing work. Let us say that, in comparison with the previous period, direct labour charges have gone up and that your cost statement as submitted to your executives reflects this condition. That is not sufficient information as a basis for an executive decision. The real reason may be a raise in the wages paid; or it may have been caused through idle time brought about through lack of materials, breakdown of machinery, accidents to operators, or for a number of other causes. Surely, the remedy is not the same for all these reasons. The true cause should be given for all important variances, whether in labour charges, direct materials, or the indirect manufacturing expenses. Increased material costs could be the increased cost of the purchased raw materials; but it might mean theft on a large scale, spoilage by a group of newer employees, maladjustment of machines, or plain sabotage by disgruntled employees. The true cause should be found and reported so that corrective measures may be applied. Those dreary, repetitive reports of operating results that are too often seen represent so much wasted costing effort, for without the story behind the costs, they are glanced at and, generally, forgotten. Always make your reports the kind of reports you would like to receive if you were the executive receiving them. The true executives are always looking beyond the figures presented to them. Make it easier for them to do so. Present your costs in such a manner that executives may take them and translate them into better management methods.

## ADDED PROFITS PAY DIVIDENDS

Assuming that costs are properly allocated to all products, the products that pay can be known and produced. It is practically impossible to classify products in terms of profit without a good cost accounting system; for costs must be known before profits by products can be computed. Without accurate product costs, the manufacturer cannot tell if he can lower his

## COSTS—WHAT THEY CAN DO TO US

selling price on certain products to meet competition; or if he is charging too little for other products; or if it would pay to drop a product altogether. Each article produced affects the financial position of the producer, but some articles affect the profits more than others. Costs should be prepared and presented so that product costs are known. If this is done and the information acted upon, costs can help a company to pay greater dividends; provided, always, that the cost system is not so overdeveloped to find product costs that the cost of costing costs eats up the profits saved. Profit salvage should be the aim of every cost accountant. Salvaging of profits is not always best accomplished by the elaborate costing systems, for the elaborate system is not always an efficient system.

## COST FINDING IS NOT COST CONTROL

Many executives talk about cost accounting procedures as if they were cost control procedures. Actually, it is impossible to control costs by any costing system. The cost figures reflect what has happened. Cost control should take place before the costs are incurred. Cost figures can point out weaknesses and errors and these can and should be employed for cost control purposes in the future. The cost of erecting a building can be controlled by the architect whilst the building is still a blueprint; the cost of making a cake can be controlled by the recipe for the cake; the cost of many articles and processes can be controlled before they come into being if the human beings responsible for their production take the necessary steps to control their cost. No human being can control costs after the articles have been completed or the process finished. Good cost accounting can, however, teach us how to control our costs, but until definite action is taken there can be no cost control. The time to control costs is when the plans are being made to produce a given article; when the factory is being built; when the flow of work is being scheduled; when the machinery is being selected; when the product is being designed; when the raw materials are being purchased and when standards of all kinds are being set. It is indeed fortunate that, in general, any mistakes that have been made can be corrected for future production schedules. When such corrections are made, cost control methods are being employed. Cost finding is accountancy; cost control, engineering. Cost control means production control and material control and labour control and quality control and maintenance control and supervision control and machine control and planning, scheduling, inspecting and dispatching. Without these closely related controls there can be no cost control. Costing accounting permits the analysis, the measurement and all other factual details of progress and accomplishments; and this can be of great assistance to a programme aimed at getting out production at a lower cost.

## TOPICAL COSTS ESSENTIAL

Except for its historical value, no executive is interested in last year's costs, and few are really interested in last month's costs. What an executive wants and what the executive should demand are the current costs, the costs for the present period, yesterday's cost of production. In other words, topical costs. The hysterical efforts of accountants trying to get out historical

## COST AND MANAGEMENT

costs are amusing to those who want to know what is happening to-day and what is going to happen to-morrow. Some accountants have the idea that the cost accounts must be tied up with the general ledger and the financial statements. This is an excellent idea — but it doesn't go far enough. Tell your executives what their labour costs were yesterday, and their material costs, and their overhead costs, and the number of units produced, and the cost per unit. Tell them what went wrong yesterday and just how production and production costs are coming along for the current period to date. These interim statements don't have to be exact to the seventeenth decimal place; they are not going to be examined with a micrometer. The navigator's sextant hasn't the fine graduations found on the setting circles of the Mount Wilson telescope, but it helps bring the ship to port. By revealing current operating conditions and by spotlighting adverse conditions as and when they occur, a good costing system can be of great value to those attempting to steer their business on the proper course. The cost accountant should primarily have a factual mind, but he must develop an imaginative outlook if his work is to be of real value to business.

## SIMPLICITY ESSENTIAL

Some costing tricks are relatively simple. Others can be extremely difficult. Some cost accountants seem to want to impress executives with their remarkable abilities by flooding their cost systems with extraneous and unnecessary matter and by going about the whole job in the most difficult way. Dean Swift must have had these cost accountants in mind when he wrote:

"So, Nat'ralists observe, a Flea  
Hath smaller Fleas that on him prey.  
And these have smaller Fleas to bite 'em,  
And so proceed ad infinitum."

Executives, generally, are not interested in the stunts, the tricks, the simplicities or the difficulties of cost accounting procedure. Executives want results. Executives want quick results, dependable results — and they don't want the procedure to cost too much. Executives are not interested in "your dog Fido having fleas" — so don't expect them to worry about the fleas preying on your dog Fido's fleas. The costing system should record facts that are used and the method employed should be the most simple that can be devised to reveal such facts. Simplicity is essential and total utility desirable in any cost accounting system.

## COSTS AND SELLING PRICES

Many executives, and many accountants, are of the opinion that selling prices are determined by adding together the total production costs and the desired profit for each product and then dividing the total so obtained by the number of units produced. Often the selling price is arrived at by totalling the estimated production costs and then carrying on with the rest of the foregoing equation. If this opinion were correct, there would be no need for cost control. There is, however, competition in business. If your competitor's costs are greater than yours, you can undersell him. If yours are greater, he can undersell you. If you can reduce your costs, you can undersell your former selling price. From this it would seem that the cost

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of production, together with the desired profit, in reality, make up the necessary price or the selling price required to produce at a profit. The necessary price is not always the price for which a product must be sold. Prices are dependent upon many factors. Supply and demand are two closely related price factors. This is the old battle between the buyers wishing to purchase at the lowest possible price and the sellers trying to sell at the highest price. It follows that if your competitor offers a product at a lower price than that at which you offer the same product, buyers will purchase from him so far as his production facilities will allow. It will not be long before you realize that to continue manufacturing the product production control will be necessary and cost control compulsory. You will find it impossible to cram your excessive production costs down the throats of the consumers. You would soon find that the only tangible measure of a man's desire for anything is the price he is willing to pay for it. No matter how you look at it, it is the consumer who ultimately sets all selling prices. All executives should think in terms of consumption and production rather than in terms of production and consumption. If this is done there is more likelihood of better understanding the true meaning of marginal costs.

## WHAT ARE MARGINAL COSTS OF PRODUCTION

A curious thing about human beings is that, although a group of people hear a speaker and they all hear exactly the same words, each person develops his own picture of what the speaker is saying, or attempting to say, and these mental impressions are not all alike. It would be strange indeed if we all saw and heard and formed opinions therefrom that were identical. Let us, for example, imagine that we are listening to a speaker who informs us that he is going to talk about "Our Homes." Each of us immediately thinks of something that is entirely different from what is in the mind of any other person in the room. It is possible that when speaking of marginal costs our ideas of what is meant might differ widely. An interesting viewpoint on marginal costs is given by S. Evelyn Thomas (in his book *Elements and Economics*), who has this to say:

"The term "marginal cost" is used in two different senses. Sometimes it is applied to the average cost per unit of output of the marginal firm, i.e., the firm which, in colloquial terms, is just "keeping its head above water". In the business world there are great differences in efficiency between firms applying the same market; some are highly efficient and prosperous, while others can only just manage to pay their way. The latter are described as "marginal firms": they produce at the highest cost per unit. The price obtained by such firm for its products just enables it to continue producing without loss; its selling price just covers expenses of production."

"In its second sense, marginal cost is applied to mean the cost of production per unit of the marginal output of an "average" or "mature" firm in any industry. An average firm is one managed with average ability and having reasonable access to the usual economies of production. If such a firm is producing a commodity which is subject to diminishing returns, the cost of production of the last unit just worth while producing will be the marginal cost of production."

## COST AND MANAGEMENT

"In the case of an industry in which increasing returns operate the meaning of marginal cost in this second sense is not so clear. If the manufacturer operating under increasing returns is turning out 100 boots per week, it would appear that his cost per unit would be constantly reduced with every increase in his output. It is found, however, that, in the case of an industry subject to increasing returns, there is an "optimum" point of production; i.e., a point at which any further increase in output or in the size of the firm is not justified by the additional return obtained. The marginal cost is that at which expansion ceases and may be taken as the average cost of production per unit of the representative firm in the industry concerned."

"In the long run, the supply price of a commodity must be such as will cover the marginal cost, i.e., the cost per unit of the marginal output of the average representative firm producing that commodity."

"But again the supply price must just cover the unit cost of production of the marginal firm, i.e., that which is producing under the least favourable conditions, for, if price falls for a considerable period, and cost of production does not fall in proportion, this marginal firm will be producing at a loss and will accordingly be forced out of production by stress of competition. Its place is taken by a more efficient firm, and marginal cost falls. This is constantly happening in practice; the marginal firms are those the liquidation or bankruptcy of which is announced in the Gazette, or rather these were the marginal firms. On their disappearance some other firms become the marginal firms."

"Thus we see that the marginal cost of production of the average firm, and the cost of production of the marginal firm tend to equality, for under free competition, the marginal supply price of all sellers in the same market must be equal. Therefore, whichever of the two conceptions of marginal cost is adopted, the ultimate effect on price will be the same."

It would be difficult to imagine where good cost accounting and adequate production control is needed more than in a marginal firm or in an organization that is likely to become a marginal firm. Yet how often do we see the executives in organizations that are beginning to experience financial difficulties or operating losses adopting what they believe to be an expense saving policy by dispensing with or curtailing their costing department — the very department which could, if the information provided is properly used, save the very life-blood of the business. The cost accountants in these firms must have undersold the value of their work; the executives lacking in basic business knowledge.

## BROADENING THE HORIZON

The time at our disposal does not permit the discussion of all that costs can do for us. Going over the ground rapidly, we will find that cost accounting is a valuable aid in:

Time and motion studies

Borrowing money

Budgetary control

Setting of standards

## COSTS—WHAT THEY CAN DO TO US

Appraisals

Plant location

Finding of unused facilities

Production control

Bonus incentives

Foremanship training

These are cost accounting aids of definite value. Cost accounting is of even greater value. Cost accounting can be of great help in securing better profits. The firms enjoying good profits are successful. The successful firm can pay better wages, and provide better working conditions, and pay for research work which ultimately might be for the good of mankind, and make available products at a price within the range of the average man. The successful firm can help make more prosperous the community in which it is located. This in turn is reflected in a more prosperous province and a more prosperous Canada. Cost accountants, your job is important. Your job is just as important as you make it. Many of us have forgotten costs during our recent fight for freedom. Some of us will require a good kick in the seat of the pants to make us again conscious of the part we should be playing in the economic life of our country. In the final analysis, our job is to assist in increasing the national wealth. We can do that job better by broadening our horizon.



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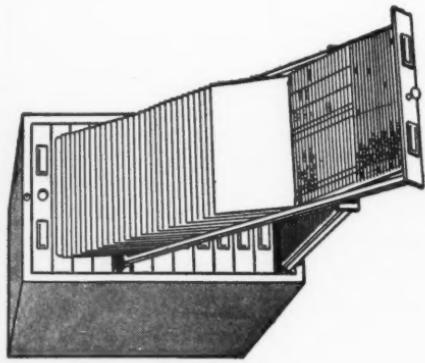
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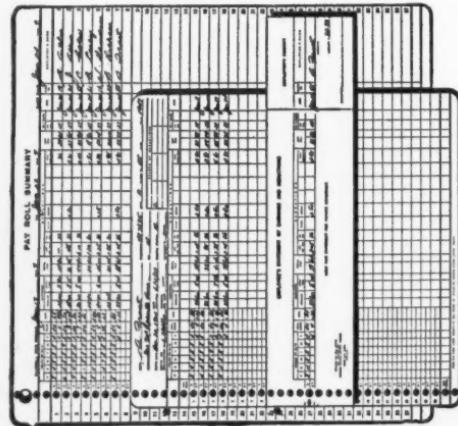


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## Costing for Distribution Expenses

W. C. McCALPIN, C.G.A., R.I.A.

Distribution Costs may be defined broadly as all those costs that are incurred from the time a manufactured or purchased article is placed in the stock room until it is converted into cash. Thus in the broadest interpretation, distribution cost to a manufacturing concern may take in all the factors of expenses of shipping, selling and administration. In this paper it is not my intention to deal with all of these groups, so I will limit the topic to those expenses customarily called selling and marketing expenses.

This field of cost analysis is one that Cost Accountants have side tracked in the past. Also, it is one that has been least developed in text-books on Cost Accounting. Some reasons for this will become apparent as I progress.

Why should this be such a live subject at the present time? We are entering the turning point in merchandising. The seller's market is in its dying moments. The buyer's market is reborn. Management is viewing with alarm the rising costs in business which grow in the easy seller's market.

Distribution Costs are absorbing a large percentage of the gross profits of Companies. Gross profits are shrinking with rising production costs, and while there is a volume market, this market is becoming less inclined to pay higher prices. The result is that management is now asking the cost accountant for information in a field which management previously pre-empted as its own. Cost Accounting in production has proven its worth. Although at first a considerable amount of education by the Cost Accountant was required before management accepted proper cost accounting methods. Now management realizes that many industries owe their survival to good Cost Accounting.

Management now approaches the Cost Accountant with this query: "Why do you not go further in your present analysis. You give us detailed actual costs as compared to standards up until the time the merchandise reaches the shipping room floor. From there on, you let us apply a hit or miss method in determining where our profits are being consumed?"

These are not the only factors that have brought about this change in management's attitude toward Cost Accounting. Many new items of consumer goods are being developed. Management now wants to know what it is going to cost to market them. Will the spread between production costs and selling price be sufficient to absorb distribution costs and leave a reasonable return of profit? These questions can only be answered through previous cost information, adequate knowledge of the available market from surveys, marketing research reports and analysis of consumer trends.

In the past, distribution costs have been applied almost entirely on a basis of a percentage of selling price. Due to the many variables that enter into the application of Distribution Costs, this method is quite inadequate except in rare cases of a lone product sold in restricted markets. This percentage method has never revealed the true picture to management. It seldom applies the actual cost to a given product and often penalizes other products with distribution costs they should not bear.

This percentage method in the past has been an easy method by which

## COSTING FOR DISTRIBUTION EXPENSES

Accountants could by-pass situations that could easily develop into moments of extreme friction among the main executive branches of industry, namely, Selling, Administration and Accounting, with Accounting occupying the difficult in-between position. This friction is minimized to-day because the results achieved by the collection and application of production costs in the manufacturing field, lessens the need for educating Selling and Administration as to the necessity for knowing the facts concerning distribution costs. The position is such that the Cost Accountant is now being asked to pry into the realm which management previously guarded very jealously and to explain what is being done with, and where are our gross profits going.

The problem of distribution costs is a three-fold task:

- (1) Collecting and recording the costs through properly classified accounts.
- (2) Analysing these costs on some acceptable or reasonable basis in view of the conditions, information and results required.
- (3) The control and interpretation of these costs through the use of predetermined standards and budgets.

As I have indicated earlier these costs are less exact because of the variety of conditions under which they arise, the extreme difficulty of establishing a uniform basis of apportionment, and the lack of relationship between effort and result. At times it may take as much effort to sell a small shipment as it does a car load. Where salesmen are paid salaries and travelling expenses, no exact measure of effort can be achieved. The result becomes more one of conjecture and opinion than of measured fact. With these limitations in mind, and some of the economic factors I will present, caution should be borne in mind, where an effort is made to distribute these costs in financial records as accounting facts.

I will not dwell upon the necessity for collecting and recording distribution costs through controls and subsidiary expense accounts properly coded as to accounts and expense items. These should be in the records of all well organized accounting systems.

The broad subject and the length of time at my disposal will not permit me to enter into the field of predetermined costs and budget control. With this in mind I will confine my subject in a limited way to the second aspect of the subject, "Analyzing Distribution Costs on an acceptable basis."

In order to analyze the Costs of Distribution we must first decide what type of information is desirable; whether the purpose of distribution cost analysis is to enable management to determine the answers to some or all of such questions as:

- (1) What products are most profitable to sell?
- (2) What territories are the most profitable on which to concentrate?
- (3) What class of customers are most profitable?
- (4) What methods of distribution are most profitable?
- (5) What salesmen are making the most profitable sales record?
- (6) What type and size of container is most profitable to sell in?

With these objects in view, the firm must decide on which basis it desires to analyze distribution costs, whether such analysis is to be a statistical study carried on periodically or whether the analysis is to be a continuous and an integral part of the accounting system.

## COST AND MANAGEMENT

For purpose of illustration I have conceived a hypothetical industry having an annual sales volume of \$2,500,000.00. The Accountant in conference with Sales, and management executives ascertains that it is desirable to know which groups of the firm's products produce the most profits. An analysis is made of the products distributed and it is found that they naturally fall into four groups:

- (1) Goods sold for use by the ultimate consumer (Retail or shelf merchandise).
- (2) Goods sold for use by other prime producers (Goods for re-manufacture).
- (3) Goods sold for use by both ultimate consumers and prime manufacturers.
- (4) Goods sold for use by prime producers as service goods.

In this illustration we will deal only with distribution expenses that are most frequently called selling expenses and limit these to the following classes of accounts:

- (1) Salesmen's salaries.
- (2) Salesmen's travel expenses.
- (3) Technical service department.
- (4) Order and billing.
- (5) Sales administration offices.
- (6) Advertising and sales promotion—
  - (a) Direct
  - (b) Indirect.

In order to establish an equitable method of distributing these expenses to the four groups of products, another analysis is made of selling methods and other factors. Some of the facts revealed are displayed in Table 1.

TABLE 1

	Group (1)	Group (2)	Group (3)	Group (4)
(a) Size of packages .....	Less than 1 lb.	100 lbs. to 100 lbs.	25 lbs. to 100 lbs.	25 lbs. to 500 lbs.
(b) Average value of orders .....	\$50 to \$5,000	\$500 to \$10,000	\$50 to \$1,000	\$10 to \$1,000
(c) Sales effort required .....	Large Staff	Small Staff	Small Staff	Medium Staff
(d) Overlapping sales effort .....	All Groups	None	All Groups	All Groups
(e) Tech. service required ..	Little	Much	Little	Medium
(f) Ad. and sales promotion ..	Much	Little	Little	Little
(g) Order and billing time per invoice .....	Same	Same	Same	Same
(h) Sales volume .....	\$500,000	\$1,500,000	\$200,000	\$300,000
(i) Gross profit .....	37%	30%	33%	33%

Analysing these facts it is decided that an equitable basis upon which to allocate salesmen's salaries and travel expenses would be on time spent selling each group. The co-operation of the salesmen is obtained to gather this information. On his daily work report he analyses his time on a percentage basis. He submits a summary of these daily percentages along with his monthly expense report. A monthly average is taken. This tabulation is illustrated in abbreviated form in Table 2.

## COSTING FOR DISTRIBUTION EXPENSES

TABLE 2

Salesman No. 1

Day	JANUARY TIME REPORT			
	Group (1)	Group (2)	Group (3)	Group (4)
1	....	....	....	....
2	70%	....	....	30%
3	50%	....	40%	10%
4	70%	10%	....	20%
	✓✓	✓✓	✓✓	✓✓
31	50%	5%	30%	15%
	—	—	—	—
<b>Totals</b>	<b>1200</b>	<b>100</b>	<b>300</b>	<b>400</b>
<b>Days Worked—20</b>				
<b>Average</b>	<b>60%</b>	<b>5%</b>	<b>15%</b>	<b>20%</b>

These monthly averages are further tabulated until twelve months' figures are obtained. This tabulation in abbreviated form is shown in Table 3.

TABLE 3

Salesman No. 1

### TWELVE MONTHS TIME REPORT

MONTH	Group (1)	Group (2)	Group (3)	Group (4)
January	60%	5%	15%	20%
February	70%	....	10%	15%
March	50%	10%	15%	15%
	✓✓	✓✓	✓✓	✓✓
December	60%	5%	....	35%
	—	—	—	—
<b>Total</b>	<b>720</b>	<b>60</b>	<b>180</b>	<b>240</b>
<b>Twelve months' average</b>	<b>60%</b>	<b>5%</b>	<b>15%</b>	<b>20%</b>

For the purpose of this illustration, I have prepared Table 4, the figures of which will be used to allocate various expenses in the expense reports and income statements to follow.

TABLE 4

### SUMMARY OF TWELVE MONTHS AVERAGE OF EACH SALESMAN

SALESMAN	Group (1)	Group (2)	Group (3)	Group (4)
(1)	60%	5%	15%	20%
(2)	50%	10%	25%	15%
(3)	75%	....	15%	10%
(4)	....	100%	....	....
	✓✓	✓✓	✓✓	✓✓
<b>Total salesmen 12</b>	<b>600</b>	<b>120</b>	<b>180</b>	<b>300</b>
<b>Average</b>	<b>50%</b>	<b>10%</b>	<b>15%</b>	<b>25%</b>

Table 4 is an abbreviation of the tabulations of all salesmen from the figures of Table 3. The tabulations of Table 3 should be applied to the individual totals of salaries and travel expenses of each salesman. This has not been done in Table 5.

## COST AND MANAGEMENT

TABLE 5  
ANALYSIS OF GENERAL SELLING EXPENSES

	Group (1)	Group (2)	Group (3)	Group (4)	Total
Salesmen's salaries and	\$45,000	\$9,000	\$13,000	\$22,500	\$90,000
Travel expenses	50%	10%	15%	25%	100%
Technical service expenses	\$4,000	\$20,000	\$ 3,000	\$ 3,000	\$30,000
	13.3%	66.7%	10%	10%	100%
Order and billing	\$8,000	\$2,000	\$4,000	\$6,000	\$20,000
Sales administrative office	\$25,000	\$5,000	\$7,500	\$12,500	\$50,000
	50%	10%	15%	25%	100%
Adver. and sales promotion	\$30,000	\$5,000	\$9,000	\$6,000	\$50,000
(1) Direct	\$2,000	\$6,000	\$800	\$1,200	\$10,000
(2) General	20%	60%	8%	12%	100%
	<b>\$114,000</b>	<b>\$47,000</b>	<b>\$37,800</b>	<b>\$51,200</b>	<b>\$250,000</b>

In this analyses of selling expenses I have used the results of Table 4 in distributing:

- (a) Salesmen's salaries and travel expenses.
- (b) Sales administration office.

Similar data was prepared for the men in the technical service department. Order and billing expenses have been distributed on a basis of the number of invoices made out. Advertising has been distributed on:

- (1) Directly applicable to the group.
- (2) General on a percentage of net sales in each group.

Table 6 is the statement of income in which Distribution Costs have been applied according to the results of Table 5.

In comparison Table 7 shows what happens where Distribution Costs are applied on a percentage of sales basis. In Table 6 net income for Group 1 has jumped from 5.5% to 14.2% and in Group 2 it has dropped from 13.2% to 9%. Great care must be exercised when the period in which distribution expenses are being applied is less than a full financial year, if there are seasonal factors controlling shorter selling periods. This is one other reason I have used a full financial period in my illustration.

Just what have we given to management in the foregoing illustration?

Historically, they now have a better knowledge of how groups of products have stood up to their full share of Selling Costs on a profit basis.

For future planning it gives a measure of what it may cost to market new lines, in percentage of salesmen's time and percentage of the dollars of sales. This applies to the development of new territories or the expansion and more concentrated development of present ones.

While the method I have illustrated serves as a yardstick for management to ascertain how various groups of products are bearing their portion of distribution costs profit-wise, it is also of assistance in formulating new policies. I am not sure that this type of statement should be used for regular statements. In my opinion it should be a supplementary statement for the guidance of management.

My reasons for this belief are:

(1) Due to the many technicalities peculiar to the operation of an industry, persons reviewing the statements for purposes of granting credit, or of providing investment capital may take an incorrect view of the stability of an industry with one major product showing a net profit of 6% against another producing 13%.

Some of these technicalities of which management is fully aware and which it uses for administrative purposes are:

## COSTING FOR DISTRIBUTION EXPENSES

 TABLE 6  
 A.B.C. MANUFACTURING CO LTD.  
 STATEMENT OF INCOME

For the year ended December 31, 1946						
	Group 1	%	Group 2	%	Group 3	%
Net Sales .....	\$500,000	100.0	\$1,500,000	100.0	\$200,000	100.0
Cost of Goods Sold .....	315,000	63.0	1,050,000	70.0	134,000	67.0
Gross Profit .....	185,000	37.0	450,000	30.0	66,000	33.0
Selling Expenses .....	114,000	22.8	47,000	3.1	37,800	18.9
Administrative Expenses .....	25,000	5.0	75,000	5.0	10,000	5.0
<b>TOTAL .....</b>	<b>139,000</b>	<b>27.8</b>	<b>122,000</b>	<b>8.1</b>	<b>47,800</b>	<b>23.9</b>
Net Profit From Operations	46,000	9.2	328,000	21.9	18,200	9.1
Excess Profits Tax .....	8,280	1.6	59,040	3.9	3,276	1.6
Normal Tax .....	10,120	2.1	72,160	4.8	4,004	2.0
<b>TOTAL .....</b>	<b>18,400</b>	<b>3.7</b>	<b>131,200</b>	<b>8.7</b>	<b>7,280</b>	<b>3.6</b>
NET INCOME .....	27,600	5.5	196,800	13.2	10,920	5.5

 TABLE 7  
 A.B.C. MANUFACTURING CO. LTD.  
 STATEMENT OF INCOME

For the year ended December 31, 1946						
	Group 1	%	Group 2	%	Group 3	%
Net Sales .....	\$500,000	100.0	\$1,500,000	100.0	\$200,000	100.0
Cost of Goods Sold .....	315,000	63.0	1,050,000	70.0	134,000	67.0
Gross Profit .....	185,000	37.0	450,000	30.0	66,000	33.0
Selling Expenses .....	50,000	10.0	150,000	10.0	20,000	10.0
Administrative Expenses .....	25,000	5.0	75,000	5.0	10,000	5.0
<b>TOTAL .....</b>	<b>75,000</b>	<b>15.0</b>	<b>225,000</b>	<b>15.0</b>	<b>30,000</b>	<b>15.0</b>
Net Profit From Operations	110,000	22.0	225,000	15.0	36,000	18.0
Excess Profits Tax .....	19,800	3.9	40,500	2.7	6,480	3.2
Normal Tax .....	74,200	4.9	49,500	3.3	7,920	4.0
<b>TOTAL .....</b>	<b>44,000</b>	<b>8.8</b>	<b>90,000</b>	<b>6.0</b>	<b>14,400</b>	<b>7.2</b>
NET INCOME .....	76,000	14.2	135,000	9.0	21,600	10.8

## COST AND MANAGEMENT

(a) The low profit lines sometimes produce excellent returns on the Capital investment employed.

(b) Certain products are seasonal in nature, but require continuous sales effort in order to realize full advantage of the season when it arrives. Therefore this technicality is against using a statement based on a period of less than a complete financial year.

(c) Some lines are produced to absorb excessive overhead required to maintain the major line. This applies more in particular to administrative expenses.

(d) Prices cannot always be set at a level to absorb their full share of distribution expenses due to:

(1) The type of market available.

(2) The competition it has in the market.

(3) The geographic position of the producing plant in relation to an expanding area of markets.

(4) Low profit or small volume lines may be supplementary to or necessary to the full development of longer profit lines.

(e) Some products will stand a long profit that will equalize the profit of the lower net profit made on other lines which may be taken on without materially increasing the total costs of distribution due to:

(1) The type of market available.

(2) The lack of active competition, or no similar competitive product.

(3) The proximity of available markets that may be expanded without materially increasing distribution costs.

In conclusion let me again stress my belief that the value of this type of statement is one of economics, to be of greatest use in formulating future policies, as to price structures, marketing of new lines, expanding present markets, in policy making for the elimination of non-profitable lines and territories.

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# « STUDENT SECTION »

## GENERAL ACCOUNTING

Comments by MR. J. D. CAMPBELL, C.A., R.I.A.

### Accounting II

A review of the marks obtained in the 1947 examinations held in Accounting II reveals the following results:

Question Number	% of candidates failing to attempt question	% of total marks obtained by all candidates	% of total marks obtained by candidates answering the question
I	2.5	56	57.6
II	12.8	53.4	61.2
III	19.8	42.4	52.8
IV	18.6	38.8	47.7
V	23.3	49.3	64.2
VI	3.5	41.7	43.3

It is interesting to note the pattern disclosed by the above tabulation which indicates that with the exception of Question I the attempts made follow the marks assigned to the questions concerned. This apparent fact coupled with the relatively high percentage of total marks obtained by candidates answering these questions might indicate (a) a failure on the part of the student to utilize his time allotment in the most efficient manner or (b) that the content of the paper was out of line with the time allotment. From the impression gained in examining the papers it appeared that considerable time was lost by the student in not realizing in each case the specific requirements of the question.

### Question IV (10 marks)

A contracting company secured a contract on 17th July, 1946, to build a bridge for \$10,000,000. During the year ending 31st March, 1947, it has made a start on performance of the contract and has accumulated on its costs of \$3,000,000. The company's engineers estimate that it will cost a further \$6,000,000 to complete the work.

#### Required:

(a) Discuss the question whether the company can show any income from this contract for the year ending 31st March, 1947, and if so, the amount. Reason fully.

(b) Indicate how the work to date would appear on the balance sheet of the company at 31st March, 1947, in light of your answer to (a).

#### Solution:

(a) The question deals with a specific aspect of revenue realization.

Revenue is considered as realized generally at the point of sale. This basis had been adopted because (i) it is the point at which a conversion takes place—where there is an exchange of one asset for another (ii) it is

## STUDENT SECTION

the point at which the amount of the revenue is objectively determinable from a sale price acceptable to both parties. Delivery to the vendee or his agent is a general test of the passing of title and for purposes of convenience it has been considered advisable to regard a sale as having been made when the goods are invoiced and delivery or shipment is made.

The taking up of profits on the contract in question does not conform very closely with the underlying principles set out as the ultimate profit is only an estimate \$1,000,000. As the execution of the contract extends over two or more accounting periods there is a question as to whether the income statement reflects fairly the results of operations in these periods if the entire revenue is taken into earnings in the period of completion. If profits are taken on the uncompleted contract it should be recognized that it is not because profits have been realized on the basis outlined above but rather because of accounting expediency or reasons of equity. The assumption is accepted that the assumed profit will be realized ultimately on the later grounds.

Income for the year, if calculated, will be computed on a "percentage of completion" basis which represents the relations between costs incurred to the date of computation and total estimated cost of the job as completed.

$$\text{Income for year} = \frac{3,000,000}{9,000,000} \times 1,000,000 \text{ (estimated profit)}$$
$$= \$333,333$$

(b) (i) assume profit taken up of \$333,333, if progress certificates are rendered on work completed.

Accounts receivable under contract .....	\$ 3,333,333
Earned surplus .....	\$ 333.333

or if the work completed has not been billed

Uncompleted contracts under progress .....	\$ 3,333,333
Earned surplus .....	333,333

(ii) assume no profit taken up	
Uncompleted contracts under progress .....	\$ 3,000,000

## COST ACCOUNTING

Comments by MR. A. VAN HARRIS, C.A.

### QUESTION 4 (30 marks). Fundamentals.

The Midwest Manufacturing Co. in producing article Z has a process cost accounting system but operates as a single process. The cost records are kept on a monthly basis.

On June 1, a statement of inventories shows:

Raw material .....	\$ 2,000
Work in process:	
Materials, 400 units at \$2 .....	800
Labor, 400 units 40% completed at \$3 .....	480

## COST AND MANAGEMENT

Total factory expenses, 400 units 40% completed	\$ 3,360
at \$0.50 .....	80

Total opening inventories .....	\$ 3,360
---------------------------------	----------

Purchases of raw materials and operating expenses for the period are as follows:

Materials .....	\$ 6,000
Labor .....	8,448
Factory overhead expenses .....	1,584

Requisitions show that \$5,460 in materials have been issued from the stockroom to the production department.

The production report for the month shows that 2,500 units of article Z were completed and transferred to finished goods during the period.

All materials are used in production at the beginning of the processing.

There were 1,500 units of Z sold for cash during the period at a 50% markup on cost.

On June 30 there are 500 units in process averaging 60% completed as to labor and factory expenses.

Required:

- a—in detail, the following statements:
  - 1—Production cost for June.
  - 2—Production completed during June.
  - 3—Production in terms of completed units.
  - 4—Unit costs.
  - 5—Work in Process Inventory, June 30.
  - 6—Cost of Goods completed.
  - 7—Cost of 1,500 units' sold.

, b—Journal entries.

### SOLUTION

#### (a) 1—Production Cost for June

Materials .....	\$ 5,460
Labour .....	8,448
Factory Overhead Expense .....	1,584
	15,492

#### 2—Production Completed during June

Inventory 1st June, in process .....	400 units
Units commenced and completed in June .....	2100 units
Total Production, per problem .....	2500 units

#### 3—Production in terms of completed units

Inventory 1st June—400 units—60% to be completed	240 units
Units commenced and completed in June .....	2100 units
Inventory 30th June—500 units—60% completed .....	300 units
Total .....	2640 units

### STUDENT SECTION

#### 4—Unit Costs—

Material 5460 ÷ (2100 x 500) .....	\$ 2.10
Labour 8448 ÷ 2640 .....	3.20
Factory Overhead 1584 ÷ 2640 .....	.60
Total Unit Cost .....	\$ 5.90

#### 5—Work in Process Inventory 30th June

Material, 500 units @ 2.10 .....	\$1,050.
Labour, 500 units 60% complete = 300 units @ 3.20 ....	960.
Factory Overhead, 500 units 60% complete = 300	
units @ .60 .....	180.
	\$2,190.

#### 6—Cost of Goods Completed

From 1st June inventory

Material—400 units @ \$2.00 .....	\$ 800.00
Labour—160 units @ 3.00 .....	480.00
Factory Overhead—160 units @ .50 .....	80.00
Labour—240 units @ 3.20 .....	768.00
Factory overhead 240 units @ .60 ....	144.00
	\$ 2,272.

From Production commenced and completed in June

Material—2100 units @ 2.10 .....	4,410.00
Labour—2100 units @ 3.20 .....	6,720.00
Factory Overhead—2100 units @ .60 .....	1,260.00
	12,390.
	\$ 14,662.

#### 7—Cost of 1500 units Sold

From 1st June inventory (as above)—400 units .....	\$ 2,272
From Production commenced and completed in	
June 1100 units—1100 @ 5.90 .....	6,490
Total .....	\$ 8,762

#### (b) Journal Entries

	Dr.	Cr.
Raw Material .....	6,000	
Payroll .....	8,448	
Factory Overhead Expense .....	1,584	
Vouchers Payable .....		16,032
To set up purchases and expenses		
for the period.		
Work in Process .....	1,360	
Work in Process Inventory .....		1,360
To transfer Inventory at 1st June		

## COST AND MANAGEMENT

Work in Process .....	15,492
Raw Material .....	5,460
Payroll .....	8,448
Factory Overhead Expense .....	1,584
Cost of Production for June	
Finished Goods .....	14,662
Work in Process .....	14,662
Transfer of Cost of completed goods	
Per Statement:	
Work in Process Inventory .....	2,190
Work in Process .....	2,190
Transfer of closing inventory in	
process at 30 June, per statement	
Cost of Goods sold .....	8,762
Finished Goods .....	8,762
Transfer of 1500 units @ 5.90 ....	6,490
400 units per statement .....	2,272
	8,762
Bank .....	13,143
Sales .....	13,143
Sale of 1500 units	
150% of cost of \$8,762.	

### Question 1 (18 marks). Advanced Cost Accounting, Paper I.

Give five general principles that should be observed in planning a system of control of selling and administrative expense.

### COMMENTS AND SOLUTION

This question was included in one of the Advanced Cost Accounting examination papers for 1947. As usual most candidates appeared to avoid the question in preference to some of the longer questions involving arithmetic and accounting. This writer has pointed out before that questions of this type are usually fairly simple. In brief outline the answer should cover the following:

Control principles. Certain general principles should be observed in planning a system of control of selling and administrative expense.

1. Selling and administrative expenses should be studied and classified as to their relation to the different functions of sales.

2. All expenses relating to the same function should be brought together to secure the cost of that function.

3. Any expenses that are too general in their application to be allocated directly to any sales function should be prorated or distributed over the different functions in the most equitable manner that can be devised.

4. After the cost of each sales function has been secured it should be applied to the sales made to secure the cost to make and sell and the profit on each sale.

5. The foregoing transactions should be recorded on the books.

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